



Energy Planning Standards for Regional Plans

Instructions

Before proceeding, please review the requirements of Parts I and II below, as well as the Overview document. Submitting a Regional Plan for review under the standards below is entirely voluntary, as enabled under [Act 174](#), the Energy Development Improvement Act of 2016. If a Regional Plan meets the standards, it will be given an affirmative “determination of energy compliance,” and its land conservation measures and specific policies will be given “substantial deference” in the Public Utility Commission’s review of whether an energy project meets the orderly development criterion in the Section 248 process. Specifically, with respect to an in-state electric generation facility, the Commission:

[S]hall give substantial deference to the land conservation measures and specific policies contained in a duly adopted regional and municipal plan that has received an affirmative determination of energy compliance under 24 V.S.A. § 4352. In this subdivision (C), “substantial deference” means that a land conservation measure or specific policy shall be applied in accordance with its terms unless there is a clear and convincing demonstration that other factors affecting the general good of the State outweigh the application of the measure or policy. The term shall not include consideration of whether the determination of energy compliance should or should not have been affirmative under 24 V.S.A. § 4352

Regional Plans may be submitted to the Department of Public Service (PSD) for a determination of energy compliance (determination), along with the completed checklist below. After a Regional Plan and completed checklist have been submitted to the PSD, the PSD will schedule a public hearing noticed at least 15 days in advance by direct mail to the requesting regional planning commission, on the PSD website, and in a newspaper of general publication in the region. The Commissioner of the PSD shall issue a determination in writing within two months of the receipt of a request. If the determination is negative, the Commissioner shall state the reasons for the denial in writing and, if appropriate, suggest acceptable modifications. Submissions for a new determination following a negative determination shall receive a new determination within 45 days.

The plans that Regions submit must:

- Be adopted
- Include the energy element as described in 24 V.S.A. § 4348a(a)(3)
- Be consistent with state energy policy (described below), in the manner described in 24 V.S.A. § 4302(f)(1)
- Meet all standards for issuing a determination of energy compliance (see below)

Regions are encouraged to consult with the PSD before undertaking the process of plan adoption, which may help in identifying any deficiencies or inconsistencies with the standards or other requirements that would be more difficult to remedy after a plan has gone through the formal adoption process.

The 2022 Comprehensive Energy Plan (CEP), published on January 14, 2022, includes several important updates to the Act 174 enhanced energy standards:

- A revised set of standards, presented in this document, updated to reflect current developments in state energy policy

- An updated suite of recommendations tailored specifically toward the work of the regions and municipalities. Unlike the set of recommendations published with the original standards, which were written prior to the passage of Act 174, these recommendations are included in the 2022 CEP itself.

In addition, a revised guidance document will be published within six months after the publication of the 2022 CEP to reflect new issues and best practices that have emerged from the regions and municipalities that have gone through an initial process of applying for a determination of energy compliance. This document will also include the recommendations for regions and municipalities outlined in the 2022 CEP.

Affirmative determinations are valid for the life cycle of a revision of the Regional and/or Municipal Plan. Plans submitted after the 2022 CEP is issued are expected to meet the updated Standards issued with the 2022 CEP, with the exception of plans for regions or municipalities who can demonstrate they had meaningfully initiated the planning process (ex. through proof of a publicly noticed meeting) before the 2022 CEP was published. Regions are encouraged to consult with the PSD regarding interim amendments that might affect any of the standards below, to discuss whether a new review is triggered. Plans approved under the previous Standards will not lose their existing determination of energy compliance as a result of new Standards being issued.

If you wish to submit your Regional Plan to the PSD for a determination, please read closely the specific instructions at the start of each section below, and attach your Regional Plan to this checklist.

Determination requests and any other questions should be submitted to: PSD.PlanningStandards@vermont.gov.

Part I: Applicant Information	
Applicant:	Two Rivers-Ottauquechee Regional Commission
Contact person:	Kevin Geiger
Contact information:	kgeiger@trorc.org 802-457-3188 ext. 3003
Received by: Click or tap here to enter text.	Date: Click or tap here to enter text.

Part II: Determination Standards Checklist

The checklist below will be used to evaluate your plan's consistency with statutory requirements under Act 174, including the requirement to be adopted, contain an enhanced energy element, be consistent with state energy policy, and meet a set of standards designed to ensure consistency with state energy goals and policies.

Please review and attach your plan (or adopted energy element/plan, along with supporting documentation) and self-evaluate whether it contains the following components. Use the Notes column to briefly describe how your plan is consistent with the standard, including relevant page references (you may include additional pages to expand upon Notes). If you feel a standard is not relevant or attainable, please check N/A where it is available and use the Notes column to describe the situation, explaining why the standard is not relevant or attainable, and indicate what measures your region is taking instead to mitigate any adverse effects of not making substantial progress toward this standard. If N/A is not made available, the standard must be met (unless the instructions for that standard indicate otherwise) and checked "Yes" in order to receive an affirmative determination. There is no penalty for checking (or limit on the number of times you may check) N/A where it is available, as long as a reasonable justification is provided in the Notes column.

Plan Adoption Requirement

[Act 174](#) requires that regional plans be adopted in order to qualify for a determination of energy compliance. The plan adoption requirement can be met through an amendment to an existing plan in the form of an energy element or energy plan, as long as the amendment or plan itself is duly adopted as part of the regional plan and incorporated by reference or appended to the underlying, full plan (i.e., is officially "in" the regional plan). If this route is chosen, regions should also provide a memo that discusses the internal consistency of the energy plan/element with other related elements of the underlying plan (particularly Transportation and Land Use), and/or whether the energy plan/element supersedes language in those other elements. Standards 1 and 2 below must be answered in the affirmative in order for a plan to receive an affirmative determination of energy compliance.

1. Has your plan been duly adopted?	☐ Yes Adoption date: Click or tap here to enter text.	☐ No	Click or tap here to enter text.
2. Is a copy of the plan (or adopted energy element/plan, along with underlying plan and memo addressing consistency of energy element/plan with other elements of underlying plan) attached to this checklist?	☒ Yes	☐ No	Click or tap here to enter text.

Energy Element Requirement

To obtain a determination of energy compliance, Act 174 requires regions to include an "energy element," revised through Act 174 to explicitly address energy across all sectors and to identify potential and unsuitable areas for siting renewable energy resources, as described in 24 V.S.A. § 4348a(a)(3):

An energy element, which may include an analysis of resources, needs, scarcities, costs, and problems within the region across all energy sectors, including electric, thermal, and transportation; a statement of policy on the conservation and efficient use of energy and the development and siting of renewable energy resources; a statement of policy on patterns and densities of land use likely to result in conservation of energy; and an identification of potential areas for the development and siting of renewable energy resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources.

The standards below are generally organized to integrate each component of the enhanced energy element with related determination standards that evaluate the plan's consistency with state goals and policies. **Energy element components are identified in bolded text.**

While regions may choose to primarily address energy used for heating, transportation, and electricity in the required energy element, they may also choose to address some of these components in related plan elements (e.g., Transportation and Land Use) and should indicate as much in the Notes column. To the extent an energy element is designed to comprehensively address energy, it should be complementary to and reference other relevant plan elements.

3. Does the plan contain an energy element, as described in 24 V.S.A. § 4348a(a)(3)? <i>Individual components of the energy element will be evaluated through the standards below.</i>	☒ Yes	☐ No	Page: Chapter 3. Land Use: 3-1 to 3-29 Chapter 4. Transportation: 4-1 to 4-11 Chapter 10. Energy: 10-1 to 10-20 Appendix D. TRORC Energy Targets: 1-23 Paragraph: Chapter 3. Land Use Chapter 4. Transportation Chapter 10. Energy Appendix D. TRORC Energy Targets Map 10: Existing Energy Generation Map Map 11: Solar Energy Potential Map Map 12: Wind Energy Potential Map Map 13: Hydroelectric Energy Potential Map Map 14: Biomass Energy Potential Map
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Consistency with State Goals and Policies Requirement

Act 174 states that regional and municipal plans must be consistent with the following state goals and policies:

- Greenhouse gas reduction requirements under [10 V.S.A. § 578\(a\)](#) (26% from 2005 levels by 2025; 40% from 1990 levels by 2030; 80% from 1990 levels by 2050)
- The 25 x 25 goal for renewable energy under [10 V.S.A. § 580](#) (25% in-state renewables supply for all energy uses by 2025)
- Building efficiency goals under [10 V.S.A. § 581](#) (e.g., reduce fossil fuel consumption across all buildings by 10% by 2025)
- State energy policy under [30 V.S.A. § 202a](#) and the recommendations for regional and municipal planning pertaining to the efficient use of energy and the siting and development of renewable energy resources contained in the [State energy plans](#) adopted pursuant to [30 V.S.A. §§ 202](#) and [202b](#)
- The distributed renewable generation and energy transformation categories of resources to meet the requirements of the Renewable Energy Standard under [30 V.S.A. §§ 8004](#) and [8005](#)

The standards in the checklist below will be used to determine whether a plan is consistent with these goals and policies. The standards are broken out by category. *Analysis and Targets* standards address how energy analyses are done within plans, and whether targets are established for energy conservation, efficiency, fuel switching, and use of renewable energy across sectors. *Pathways (Implementation Actions)* standards address the identification of actions to achieve the targets. *Mapping* standards address the identification of suitable and unsuitable areas for the development of renewable energy.

Regions may choose to incorporate the information necessary to meet the standards in their energy elements, and/or in other sections of their plans (many transportation items may fit best in the Transportation chapters of plans, for instance). However, plans must be internally consistent, and applicants should cross-reference wherever possible.

Analysis and Targets Standards

For the analysis determination standards below, regions are expected to develop or update their own analysis (which the PSD will support through regionalization of the modeling efforts conducted to support the 2022 CEP), and to then break out the analysis for their municipalities, who can use their region-provided analysis to meet the municipal *Analysis & Targets* standards. The PSD and regional planning commissions developed several guidance documents to explain the expected level of detail in and suggestions regarding data sources and methodologies available for meeting the *Analysis & Targets* standards below. These guidance documents can be retrieved from the following links:

- In 2017, the PSD developed two guidance documents, one for regional plans and one for municipal plans:
 - [Guidance for Regional Plans](#)
 - [Guidance for Municipal Plans](#)
- In addition, in 2019 the Northwest Regional Planning Commission, with input from all 11 RPCs in the state, created [a best practices and resources guide](#) for municipalities to use when undertaking enhanced energy planning.

The guidance developed by the PSD will be updated in 2022 to incorporate best practices that have emerged from the regions and municipalities who have completed an initial round of energy plans. Note that standards 4A-4E are all derived directly from requirements in Act 174 (with minor modifications to make them feasible) and must be met affirmatively in order for a regional plan to receive an affirmative determination of energy compliance. Standard 5 is also

required and addresses “municipalization” of analysis and targets; regions should check “Yes” if they have or if they have a plan to supply this information to their municipalities.

Targets set by regions should be aligned with state energy policy (see the goals and policies listed above). Where targets (and efforts to reach them) depart significantly from state energy goals and policies, an explanation for how the plan otherwise achieves the intent of the state goal or policy should be provided. The guidance document also offers additional clarification on alignment with state goals and policies.

The analysis items below are intended to provide regions with an overview of their current energy use, and with a sense of the trajectories and pace of change needed to meet targets, which can be translated into concrete actions in the *Pathways* standards below. Targets provide regions with milestones or checkpoints along the way toward a path of meeting 90% of their total energy needs with renewable energy, and can be compared with the potential renewable energy generation from areas identified as potentially suitable in the *Mapping* standards exercise below to give regions a sense of their ability to accommodate renewable energy that would meet their needs.

4. Does your plan’s energy element contain an analysis of resources, needs, scarcities, costs, and problems within the region across all energy sectors (electric, thermal, transportation)? <i>Note: You may want to reference the guidance document, developed by Northwest Regional Planning Commission, with input from all 11 regional planning commissions, on best practices for conducting such an analysis, including examples and suggested units to use when developing analyses.</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-3 to 10-10 Appendix D. TRORC Energy Targets: 2-6 Paragraph: Chapter 10. Energy D. Key Energy Issues E. Regional Energy Supply, Demand, and End Use F. Electricity Conservation and Renewable Generation G. Transportation and Land Use H. Thermal Energy Appendix D. TRORC Energy Targets: Tables 4A Tables 4B Tables 4C Tables 4D Notes: The Regional Plan includes an energy element (Chapter 10. Energy) that contains an analysis of
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			resources, needs, scarcities, costs, and problems with the region across the electric, thermal, and transportation sectors. Targets for the region and each of our municipalities is included within tables in Appendix D: TRORC Energy Targets.
A. Does the plan estimate current energy use across transportation, heating, and electric sectors? <i>As noted in the Guidance Document, plans meet this standard by transparently calculating estimated energy consumption by region by 1) transportation, 2) building heat, and 3) electricity consumption. More detailed support is available in Appendix A of the Guidance developed by the PSD.</i>	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 2-3 Paragraph: Appendix D. TRORC Energy Targets: Tables 4A Notes: The Regional Plan includes an energy element (Chapter 10. Energy) that contains an analysis of resources, needs, scarcities, costs, and problems with the region across the electric, thermal, and transportation sectors.
B. Does the plan establish targets for 2025, 2035, and 2050 for thermal efficiency improvements and use of renewable energy for heating and evaluate the amount of thermal-sector conservation, efficiency, and conversion to alternative heating fuels needed to achieve these targets?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 4 Paragraph: Appendix D. TRORC Energy Targets: Tables 4B Notes: The Regional Plan includes targets for the region and each of our municipalities for thermal efficiency improvements within tables 4B in Appendix D:

			TRORC Energy Targets.
C. Does the plan establish targets for 2025, 2035, and 2050 for use of renewable energy for transportation and evaluate transportation system changes and land use strategies needed to achieve these targets?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 5 Paragraph: Appendix D. TRORC Energy Targets: Tables 4C Notes: The Regional Plan includes targets for the region and each of our municipalities for the use of renewable energy within the transportation sector within tables 4C in Appendix D: TRORC Energy Targets.
D. Does the plan establish 2025, 2035, and 2050 targets for electric efficiency improvements and use and renewable energy for electricity and evaluate electric-sector conservation and efficiency needed to achieve these targets?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 6 Paragraph: Appendix D. TRORC Energy Targets: Tables 4D Notes: The Regional Plan includes targets for the region and each of our municipalities for energy efficiency and generation within tables 4D in Appendix D: TRORC Energy Targets.
5. Has your region provided (or do you have a plan to provide) a breakout of the analyses and targets above to your municipalities? <i>Please explain your timeline for completing this task in the Notes column.</i>	☒ Yes	☐ No	Page: Click or tap here to enter text. Paragraph:

			Notes: TRORC will create individual documents for each of our 30 municipalities that contains their energy data and targets for 2025, 2035, and 2050. These have been sent to towns and can be found under each town on their page on our website at https://www.trorc.org/member-towns/.
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Pathways (Implementation Actions) Standards			
This section examines whether plans meet the Act 174 expectation that they include pathways and recommended actions to achieve the targets identified through the <i>Analysis and Targets</i> section of the Standards (above). Plans are expected to include or otherwise address all of the pathways (implementation actions) below, unless N/A is provided as an option. There is no penalty for choosing N/A one or more times, as long as a reasonable justification is provided in the Notes column, preferably including an explanation of how the plan alternatively achieves attainment of the targets should be included. If N/A is not provided as an option, the plan must meet the standard, and “Yes” must be checked, in order for the plan to meet the requirements for a determination (unless the instructions particular to that standard indicate otherwise). PSD will be updating its guidance documents in 2022 with potential implementation actions included in the 2022 Comprehensive Energy Plan, from existing regional plans that have received a determination of compliance, and from other sources. We also offer potential starting points for consideration as italicized text under each standard. Plans are encouraged to promote as diverse a portfolio of approaches as possible in each sector, or if not, to explain why they take a more targeted approach. Implementation actions may fit best in a holistic discussion contained within a plan’s energy element, though cross-referencing to other relevant plan elements is also acceptable. Regions must demonstrate a commitment to achieving each standard in policies, objectives, and implementation actions in clear, action-oriented language. Definitions of policies, objectives, and actions can be found on p. 52 of the Vermont State Planning Manual Module 1.			
6. Does your plan’s energy element contain policies or objectives on the conservation and efficient use of energy in buildings?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-4 to 10-10 and 10-14 to 10-17 Paragraph: Chapter 10. Energy: F. Electricity Conservation & Renewable Generation

			Electricity Conservation and Renewable Generation Goals, Policies, & Recommendations G. Transportation and Land Use Transportation & Land Use Goals, Policies, & Recommendations H. Thermal Energy Thermal Energy Land Use Goals, Policies, & Recommendations Notes: Yes, the Regional Plan contains numerous goals, policies, and recommendations for implementation that support the conservation and efficient use of energy in the building sector.
A. Does the plan encourage conservation by individuals and organizations? <i>(Actions, objectives, and policies could include educational activities and events such as convening or sponsoring weatherization workshops, supporting local energy committees, encouraging the use of existing utility and other efficiency and conservation programs and funding sources, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-14 to 10-17 Paragraph: Chapter 10. Energy: Electricity Conservation and Renewable Generation Policy 2 and Recommendation 4 Transportation & Land Use Policy 8 and Recommendations 1, 2, 3 Thermal Energy Land Use Policies 1, 3 and Recommendations 1, 2, 3, 5, 6, 7, 8, 9, 11 Notes: Yes, the Regional Plan contains numerous policies and recommendations that encourage conservation.
B. Does the plan promote efficient and climate resilient buildings?	☒ Yes	☐ No	Page:

<i>(Actions, objectives, and policies could include education on and promotion of residential and commercial building energy standards for new construction and existing buildings, including additions, alterations, renovations and repairs; promoting the implementation of residential and commercial building efficiency ratings and labeling; assistance to municipalities considering adopting stretch codes; identification of buildings and facilities that serve critical community functions, etc.)</i>			Chapter 10. Energy: 10-4 to 10-6 ; 10-14 ; 10-8 to 10-10 ; 10-16 to 10-17 Paragraph: Chapter 10. Energy Chapter: F. Electricity Conservation & Renewable Generation Electricity Conservation and Renewable Generation Policy 2 H. Thermal Energy Thermal Energy Goal 1, 2, 3, 4; Policy 1, 3, 4, 5; and Recommendations 1, 2, 3, 5, 6, 7, 8, 9, 11 Notes: Yes, the Regional Plan contains numerous goals, policies, and recommendations for implementation that support the construction of, or rehabilitation of, energy efficient and climate resilient buildings.
C. Does the plan promote decreased use of fossil fuels for heating? <i>(Actions, objectives, and policies could promote switching to wood, liquid biofuels, biogas, geothermal, and/or electricity (e.g. beneficial electrification). Suitable devices include advanced wood heating systems and cold-climate heat pumps, as well as use of more energy efficient heating systems; and identifying potential locations for, and barriers to, deployment of biomass district heating and/or thermal-led combined heat and power systems in the region)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-4 to 10-6 ; 10-14 ; 10-8 to 10-10 ; 10-16 to 10-17 Paragraph: Chapter 10. Energy Chapter: F. Electricity Conservation & Renewable Generation Electricity Conservation and Renewable Generation Policy 2 H. Thermal Energy Thermal Energy Goal 1, 2, 3, 4; Policies 2, 3, 4; and Recommendations 2, 3

			Notes: Yes, the Regional Plan contains numerous goals, policies, and recommendations for implementation that support the decreased use of fossil fuels for heating buildings.
D. Other (please use the notes section to describe additional approaches that your region is taking)	☐ Yes	☐ No ☒ N/A	Page: Click or tap here to enter text. Paragraph: Click or tap here to enter text. Notes: Click or tap here to enter text.
7. Does your plan's energy element contain policies and objectives on reducing transportation energy demand and single-occupancy vehicle use, and encouraging use of renewable or lower-emission energy sources for transportation?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Goals, Policies, & Recommendations Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Goals, Policies, & Recommendations Notes: Yes, numerous policies within the Regional Plan's Energy and Transportation Chapters support the reduction in vehicle miles traveled and a shift away from single-occupancy vehicle trips through multimodal and active transportation. The Plan also contains numerous policies within the Regional Plan's Energy and Transportation Chapters that encourage the transition to electric or non-fossil fuel

			transportation options.
A. Does the plan promote a shift away from single-occupancy vehicle trips through strategies appropriate to the region? <i>(Actions, objectives, or policies could include facilitation of rideshare, vanpool, car-sharing, or public transit initiatives; working with public transit providers and other stakeholders to identify and develop new public transit routes and promote full utilization of existing routes; efforts to develop or increase park-and-rides; enhancement of options such as rail and telecommuting; deployment of broadband to support remote services such as teleworking or telemedicine, education; intergovernmental cooperation; or assistance with grants related to any of the above, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Goal 1, 2, 4, 5; Policies 1, 4, 5, 6, 7, 8; and Recommendation 1, 2, 3 Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Goal 3, 4, 5; Policies 2, 3, 11, 13, 14, 15, 16, 17, 20; and Recommendations 2, 9, 10, 11, 12, 13, 14, 16 Notes: Yes, numerous policies within the Regional Plan's Energy and Transportation Chapters support the reduction in vehicle miles traveled and a shift away from single-occupancy vehicle trips through multimodal and active transportation.
B. Does the plan promote a shift away from gas/diesel vehicles to electric or other non-fossil fuel transportation options through strategies appropriate to the region? <i>(Actions, objectives, or policies could include developing a plan for preferred siting of charging infrastructure (ex. placement of fast or level two chargers), installing or promoting the installation of electric vehicle charging infrastructure, providing education and outreach to potential users, supporting electric and non-fossil fuel vehicle availability through outreach to vehicle dealers, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Goal 3, Policy 2, 3

			Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Policy 11 Notes: Yes, several policies within the Regional Plan's Energy and Transportation Chapters support the transition to electric or non-fossil fuel transportation options.
C. Does the plan facilitate the development of walking and biking infrastructure through strategies appropriate to the region? <i>(Actions, objectives, or policies could include studying, planning for, seeking funding for, or implementing improvements that encourage safe and convenient walking and biking; adopting a "Complete Streets" policy, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Policies 1, 6, 7 and Recommendations 2, 3 Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Goal 5; Policies 12, 16, 20, 21 and Recommendations 12, 13, 14, 16 Notes: Yes, several policies within the Regional Plan's Energy and Transportation Chapters support the development of walking and biking infrastructure.

D. Other (please use the notes section to describe additional approaches that your region is taking)	☐ Yes	☐ No ☒ N/A	Page: Click or tap here to enter text. Paragraph: Click or tap here to enter text. Notes: Click or tap here to enter text.
8. Does your plan’s energy element contain policies and objectives on patterns and densities of land use likely to result in conservation of energy and climate resilience?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Chapter 3. Land Use: 3-3 to 3-21 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Goals, Policies, & Recommendations Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Goals, Policies, & Recommendations Chapter 3. Land Use: B. Overall Land Use Goals C. Future Land Use Areas Notes: Yes, the Regional Plan strongly encourages development in compact, mixed use centers and discourages development in more rural areas as outlined in the Future Land Use section of the Land Use Chapter. Numerous policies within the Land Use Chapter, and some policies within the Transportation and Energy Chapters support this pattern of development.

A. Does the plan include land use policies (and descriptions of current and future land use categories) that demonstrate a commitment to reducing sprawl and minimizing low-density development? <i>(Actions, objectives, or policies could include promoting wastewater infrastructure in planned growth areas, policies or zoning that require design features that minimize the characteristics of strip development [multiple stories, parking lot to the side or back of the store], requirements that development in those areas be connected by means other than roads and cars, policies or zoning that limits conversion and fragmentation of forest blocks and impacts to primary agricultural soils, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-6 to 10-8; 10-15 to 10-16 Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Chapter 3. Land Use: 3-3 to 3-21 Paragraph: Chapter 10. Energy: G. Transportation & Land Use Transportation & Land Use Goal Policy 1 Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Policy 2 and Recommendations 5, 13 Chapter 3. Land Use: B. Overall Land Use Goals: Goals 1, 4, and 6 C. Future Land Use Areas: Downtown Centers Policy 1, Village Centers Policy 1, Planned Growth Area Policy 1, Transition Goal 1 Notes: Yes, the Regional Plan strongly encourages development in compact, mixed use centers and discourages development in more rural areas as outlined in the Future Land Use section of the Land Use Chapter. Numerous policies within the Land Use Chapter, and some policies within the Transportation and Energy Chapters support this pattern of development.
B. Does the plan strongly prioritize development in compact, mixed-use centers when physically feasible and appropriate to the use of the development, or identify steps to make such compact development more feasible? <i>(Actions, objectives, or policies could include promoting and assisting with</i>	☒ Yes	☐ No	Page: Chapter 4. Transportation: 4-2 to 4-4; 4-8 to 4-10 Chapter 3. Land Use: 3-3 to 3-21

<i>municipal participation in the state designation programs; facilitating the exploration of water or sewage solutions that enable compact development; working with state agencies and local utilities to identify priority areas for EV charging, storage, and other resources to promote downtown economic and energy resilience; etc.)</i>			Paragraph: Chapter 4. Transportation: B. Regional Transportation Characteristics Transportation Policies 2, 7, 8, 9, 18 and Recommendation 2, 5, 13 Chapter 3. Land Use: B. Overall Land Use Goals: Goals 1, 4, and 6 C. Future Land Use Areas: Downtown Centers Policy 1, Village Centers Policy 1, Planned Growth Area Policy 1, Transition Goal 1 Notes: Yes, the Regional Plan strongly encourages development in compact, mixed use centers and discourages development in more rural areas as outlined in the Future Land Use section of the Land Use Chapter. Numerous policies within the Land Use Chapter, and some policies within the Transportation Chapter support this pattern of development.
C. Other (please use the notes section to describe additional approaches that your region is taking)	☐ Yes	☐ No ☒ N/A	Page: Click or tap here to enter text. Paragraph: Click or tap here to enter text. Notes: Click or tap here to enter text.
9. Does your plan's energy element contain policies and objectives on the development and siting of renewable energy, storage, and transmission and distribution resources?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Appendix D. TRORC Energy Targets: 7-8 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting

			Utility-Scale Renewable Energy Facility Siting Goals, Policies, & Recommendations Appendix D. TRORC Energy Targets Table 9A Table 9B Table 9C Maps: Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan continues numerous goals, policies, and recommendations for implementation in the Energy Chapter, Land Use Chapter, and Transportation Chapter that guide the development and siting and transmission of renewable energy generation.
A. Does the plan evaluate (estimates of or actual) generation from existing renewable energy generation in the region, and break this information out by municipality?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 7 Paragraph: Appendix D. TRORC Energy Targets Table 9A Notes: The Regional Plan existing renewable energy generation through the mapping exercise as reported in Table 9A of Appendix D.

B. Does the plan analyze generation potential, through the mapping exercise (see <i>Mapping</i> standards, below), from potentially suitable areas in the region, and break this information down by municipality?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 7 Paragraph: Appendix D. TRORC Energy Targets Table 9B Notes: The Regional Plan analyzes generation potential through the mapping exercise as reported in Table 9B of Appendix D.
C. Does the plan identify sufficient land in the region for renewable energy development to reasonably reach 2050 targets for renewable electric generation, based on population and energy resource potential (from potential resources identified in the <i>Mapping</i> exercise, below), accounting for the fact that land may not be available due to private property constraints, site-specific constraints, or grid-related constraints?	☒ Yes	☐ No	Page: Appendix D. TRORC Energy Targets: 8 Paragraph: Appendix D. TRORC Energy Targets Table 9C Notes: The Regional Plan identifies sufficient land through the mapping exercise as reported in Table 9C of Appendix D.
D. Does the plan ensure that any regional or local constraints (regionally or locally designated resources or critical resources, from 12B and 12C under <i>Mapping</i>, below) do not prohibit or have the effect of prohibiting the provision of sufficient renewable energy to meet state, regional, or municipal targets?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy:

			I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Goal 1; Policies 1, 2, 3; Recommendation 1 Maps: Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan lists possible and known constraints in Section H of the Energy Chapter. The Regional Plan does not distinguish between known or possible constraints, but rather combines both. The Regional Plans energy potential maps also show areas with known or possible constraints. These areas with constraints do not prohibit renewable energy generation, they merely note where constraints exist.
E. Does the plan include policies and objectives to accompany maps (could include general siting guidelines), including policies and objectives to accompany any preferred, potential, and unsuitable areas for siting generation (see 12 and 13 under <i>Mapping</i>, below)?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Goal 1; Policies 1, 2, 3; Recommendation 1 Maps: Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes:

			The Regional Plan does not include maps that show preferred locations, but the Regional Plan supports the development of renewable energy facilities in preferred areas as per PUC's net-metering rule 5.100 in Section H of the Energy Chapter. Section H of the Energy Chapter also discusses constraints, prime areas, and unsuitable areas. The Regional Plan's maps also show prime areas and constraints across the region.
F. Does the plan prioritize maximizing renewable generation on preferred locations (such as the categories outlined under 12E in the <i>Mapping</i> standards, below)?	☒ Yes	☐ No ☐ N/A	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Goal 1; Policies 1, 2, 3; Recommendation 1 Maps: Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan does not include maps that show preferred locations, but the Regional Plan supports the development of renewable energy facilities in preferred areas as per PUC's net-metering rule 5.100 in Section H of the Energy Chapter.
G. Other (please use the notes section to describe additional approaches that your region is taking)	☐ Yes	☐ No ☒ N/A	Page: Click or tap here to enter text. Paragraph: Click or tap here to enter text. Notes: Click or tap here to enter text.

10. Does your plan’s energy element assess the potential equity impacts of the policies and objectives included to meet standards 6-9? <i>Such an assessment could consider, for example, what communities will be most impacted by the policy or objective, the distribution of benefits and burdens related to specific actions, whether actions will address existing inequities, or the extent to which communities were or will be consulted in the development of any programs or actions.</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-3 to 10-4 Paragraph: Chapter 10. Energy: D. Key Energy Issues Notes: The Regional Plan discusses the equity impacts of policies and objectives of the Plan in the Key Energy Issues section of the Energy Chapter. This section discusses Energy Justice and equity concerns that residents in our region face.
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Mapping Standards

Act 174 requires plans to identify potential areas for the development and siting of renewable energy, storage, transmission, and distribution resources and areas that are unsuitable for siting those resources or particular categories or sizes of those resources. It furthermore requires that the standards address the potential generation from the potential siting areas. Lastly, it requires that – in order to receive an affirmative determination – regional plans allow for the siting in the region of all types of renewable generation technologies.

The *Mapping* standards lay out a sequence of steps for planners to examine existing renewable resources and to identify potential (and preferred) areas for renewable energy development, and to identify likely unsuitable areas for development, by layering constraint map layers on to raw energy resource potential map layers. The maps should help regions visualize and calculate the potential generation from potential areas, and compare it with the 2025, 2035, and 2050 targets from the *Analysis and Targets* standards to get a sense of the scale and scope of generation that could be produced within the region to meet the region’s needs. The PSD will provide additional guidance to accompany the standards that fleshes out the steps, layers, and standards more fully.

Plans must include maps that address all of the standards below, unless N/A is provided as an option, in which case a compelling reason why the standard is not applicable or relevant should be provided in the Notes column. Regions must develop their own maps, and to then break out the maps for their municipalities, who can use their region-provided maps to meet the municipal *Mapping* standards.

The map and the text describing the policies or rules used to construct the map, as well as the text describing specific policies applicable to map features, should be complementary. That should help ensure that any “land conservation measures and specific policies” that might be given substantial deference in the context of a particular project review under 30 V.S.A. § 248 are clearly identifiable in the text, should a map lack sufficient clarity or granularity regarding the area in which a project is proposed. Policy language must be clear, unqualified, and create no ambiguity in relation to the specific area and the type of permissible development.

Consistent with the Climate Action Plan and Act 171 of 2016, the 2022 update to the Act 174 standards adds standard 12F to emphasize the value of forest lands in sequestering and storing carbon. By the 2028 update to the standards, the Department expects to incorporate Vermont Conservation Design priority interior forest and connectivity blocks into the possible constraints in standard 12C.

11. Does the plan identify and map existing electric generation sources? <i>Maps may depict generators of all sizes or just those larger than 15 kW, as long as information on generators smaller than 15 kW is summarized and provided or referenced elsewhere. It is expected that the best available information at the time of plan creation will be used. This information is available from the PSD.</i>	☒ Yes	☐ No	Page: Click or tap here to enter text. Paragraph: Maps: Map 10: Existing Energy Generation Map Notes: The Regional Plan’s Existing Energy Generation Map shows the location of the existing energy generation facilities.
12. Does the plan identify potential areas for the development and siting of renewable energy resources and the potential generation from such generators in the identified areas, taking into account factors including resource availability, environmental constraints, and the location and capacity of electric grid infrastructure? <i>Maps should include the following (available from VCGI and ANR), and the resulting Prime and Secondary Resource Maps will together comprise “potential areas”:</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map

			Map 14: Wind Energy Potential Map Notes: Yes, the Regional Plan identifies area for the potential development of renewable energy resources while considering factors such as raw potential availability, constraints, and grid capacity in the energy potential maps as well as the Section H of the Energy Chapter.
A. Raw renewable potential analysis (wind and solar), using best available data layers (including LiDAR as appropriate).	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan discusses raw generation potential locations in Section H of the Energy Chapter. The Regional Plan's energy potential maps also map the areas with raw potential generation across the region.
B. Known constraints (signals likely, though not absolute, unsuitability for development based on statewide or local regulations or designated critical resources) to include:	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18

• Vernal Pools from Vermont Center for Ecostudies (VCE; confirmed layers) • DEC River Corridors • FEMA Floodways • State-significant Natural Communities • Rare, Threatened, and Endangered Species • National Wilderness Areas • Class 1 and Class 2 Wetlands (VSWI and advisory layers) • Regionally or Locally Identified Critical Resources <i>If areas are constrained for the development of renewable energy due to the desire to protect a locally designated critical resource (whether a natural resource or a community-identified resource), then the land use policies applicable to other forms of development in this area must be similarly restrictive; for this category, policies must prohibit all permanent development (and should be listed in the Notes column).</i> <i>These areas should be subtracted from raw renewable energy resource potential maps to form Secondary Resource Maps</i>			Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan lists possible and known constraints in Section H of the Energy Chapter. The Regional Plan does not distinguish between known or possible constraints, but rather combines both. The Regional Plans energy potential maps also show areas with known or possible constraints.
C. Possible constraints (signals conditions that would likely require mitigation, and which may prove a site unsuitable after site-specific study, based on statewide or regional/local policies that are currently adopted or in effect), including but not limited to: • Vernal Pools from VCE (potential and probable layers) • Agricultural Soils • FEMA Special Flood Hazard Areas • Protected Lands (State fee lands and private conservation lands) • Act 250 Agricultural Soil Mitigation areas • Deer Wintering Areas • The following features from ANR's Vermont Conservation Design: ○ Interior Forest Blocks – Highest Priority ○ Connectivity Blocks – Highest Priority ○ Physical Landscape Blocks – Highest Priority ○ Surface Water and Riparian Areas – Highest Priority	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map

- Hydric Soils - Regionally or Locally Identified Resources <i>If locations are constrained for the development of renewable energy due to the desire to protect a locally designated resource (whether a natural resource or community-identified resource, like a viewshed), then the land use policies applicable to other forms of development must be similarly restrictive (and should be listed in the Notes column).</i> <i>These areas should be subtracted from Secondary Resource Maps to form Prime Resource Maps.</i>			Notes: The Regional Plan lists possible and known constraints in Section H of the Energy Chapter. The Regional Plan does not distinguish between known or possible constraints, but rather combines both. The Regional Plans energy potential maps also show areas with known or possible constraints.
D. Transmission and distribution resources and constraints, as well as transportation infrastructure. <i>(Including three-phase distribution lines, known constraints from resources such as Green Mountain Power’s solar map, known areas of high electric load, etc.)</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Notes: The Regional Plan’s energy potential maps show transmissions and distribution resources and constraints, as well as the region’s transportation infrastructure.
E. Preferred locations (specific areas or parcels) for siting a generator or a specific size or type of generator, accompanied by any specific siting criteria for these locations <i>Narrative descriptions of the types of preferred areas in accompanying plan text are acceptable, though mapping of areas and especially specific parcels</i>	☒ Yes	☐ No N/A	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18

<i>(to the extent they are known) is highly encouraged, to signal preferences to developers, particularly for locally preferred areas and specific parcels that do not qualify as a statewide preferred location under i. below.</i> <i>The locations identified as preferred must not be impractical for developing a technology with regard to the presence of the renewable resource and access to transmission/distribution infrastructure.</i>			Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Notes: The Regional Plan does not include maps that show preferred locations, but the Regional Plan supports the development of renewable energy facilities in preferred areas as per PUC's net-metering rule 5.100 in Section H of the Energy Chapter.
i. Statewide preferred locations such as rooftops (and other structures), parking lots, previously developed sites, brownfields, gravel pits, quarries, and Superfund sites. <i>Note: These preferred locations align with the locations identified in the net metering rule 5.100. As of January 14, 2022 that rulemaking is currently active. Should the preferred locations identified in the rule change during that rulemaking, plans would be required to consider the updated preferred locations identified.</i>	☒ Yes	☐ No ☐ N/A	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Notes: The Regional Plan does not include maps that show preferred locations, but the Regional Plan supports the development of renewable energy facilities in preferred areas as per PUC's net-metering rule 5.100 in Section H of the Energy Chapter.
ii. Other potential locally preferred locations <i>For example, customer on- or near-site generation, economic development areas, unranked and not currently farmed agricultural soils, unused land near already developed infrastructure, locations suitable for large-scale biomass district heat or thermal-led cogeneration, potential locations for biogas heating and digesters, etc.</i> <i>These are particularly important to map if possible (with the input of</i>	☐ Yes	☐ No ☒ N/A	Page: Click or tap here to enter text. Paragraph: Click or tap here to enter text. Notes:

<i>municipalities), as “a specific location in a duly adopted municipal plan” is one way for a net metering project to qualify as being on a preferred site.</i>			
F. Does the plan (a) evaluate whether forest blocks or habitat connectors identified pursuant to 24 V.S.A. § 4348a(a)(2)(F) [for regional plans] and 24 V.S.A. § 4382(a)(2)(D) [for municipal plans] should be treated as possible constraints, and (b) ensure that land conservation measures and specific policies established for the development and siting of renewable energy resources incorporates consideration of the evaluation undertaken in part (a)?	☒ Yes	☐ No ☐ N/A	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Notes: Yes the Regional Plan includes forest blocks and habitat connectors are included as constraints in Section H of the Energy Chapter.
13. Does the plan identify areas that are unsuitable for siting renewable energy resources or particular categories or sizes of those resources? <i>Either Yes or No (“No” if the plan chooses not to designate any areas as unsuitable) is an acceptable answer here. “Resources” is synonymous with “generators.”</i>	☒ Yes (“Yes” for A and B must also be selected below)	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Chapter 3. Land Use: 3-3 to 3-21 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Maps: Map 11: Hydroelectric Energy Potential Map Map 12: Biomass Energy Potential Map Map 13: Solar Energy Potential Map Map 14: Wind Energy Potential Map Chapter 3. Land Use:

			C. Future Land Use Areas Notes: The Regional Plan discusses suitable and unsuitable sites for regional generation in Section H of the Energy Chapter. The Regional Plan includes maps that show prime areas for renewable energy siting, as well as areas with constraints.
A. Are areas identified as unsuitable for particular categories or sizes of generators consistent with resource availability and/or land use policies in the regional or municipal plan applicable to other types of land development (answer only required if “Yes” selected above, indicating unsuitable areas have been identified)? <i>If areas are considered unsuitable for energy generation, then the land use policies applicable to other forms of development in this area with similar impacts should similarly prohibit those other types of development. Please note these policies in the Notes column.</i>	☒ Yes	☐ No ☐ N/A (if no unsuitable areas are identified)	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Chapter 3. Land Use: 3-3 to 3-21 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Maps: Solar Energy Potential Map Wind Energy Potential Map Hydroelectric Energy Potential Map Biomass Energy Potential Map Chapter 3. Land Use: B. Future Land Use Areas Notes: The Regional Plan identifies areas that are deemed unsuitable for renewable energy development which are also unsuitable to other forms of land use development. In general, the Land Use Chapter discourages development in the areas identified as

			unsuitable or constrained.
B. Does the plan ensure that any regional or local constraints (regionally or locally designated resources or critical resources, from 12B-12C above) identified are supported through data or studies, are consistent with the remainder of the plan, and do not include an arbitrary prohibition or interference with the intended function of any particular renewable resource size or type? <i>Please explain in the Notes column.</i>	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12; 10-18 Chapter 3. Land Use: 3-3 to 3-21 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Utility-Scale Renewable Energy Facility Siting Policy 3 Chapter 3. Land Use: B. Future Land Use Areas Notes: The Regional Plan identifies areas that are deemed unsuitable for renewable energy development which are also unsuitable to other forms of land use development. In general, the Land Use Chapter discourages development in the areas identified as unsuitable or constrained.
14. Does the plan allow for the siting in the region of all types of renewable generation technologies?	☒ Yes	☐ No	Page: Chapter 10. Energy: 10-10 to 10-12 Paragraph: Chapter 10. Energy: I. Utility-Scale Renewable Energy Facility Siting Notes: Yes, the Regional Plan allows for sitting of all types

			of renewable generation technologies in the region.
15. Has your region provided (or do you have a plan to provide) a breakout of the map product(s) above to your municipalities? <i>Please explain your timeline for completing this task in the Notes column.</i>	☒ Yes	☐ No	Page: Click or tap here to enter text. Paragraph: Notes: Yes, TRORC provided a copy of the Existing Energy Generation Map, Solar Energy Potential Map, Wind Energy Potential Map, Hydroelectric Energy Potential Map, and Biomass Energy Potential Map to each of our 30 municipalities.